

Amended Patent Claims

(97)

1. Method of transmitting signals, e.g. control signals, request signals, interrogation signals etc. in a control system comprising at least two units, wherein at least one of
5 said units is designed to operate as a master unit and wherein at least one of said units is designed to operate as a slave unit,
- whereby a plurality of channels may be used for the transmission,
- whereby a master unit performs the steps of detecting a vacant channel and transmitting a signal via said vacant channel, and
10 - whereby said at least one slave unit performs the step of scanning the channels for transmitted signals,
wherein
- said signal transmitted by said master unit comprises a preamble having a length corresponding at least to the time required for said at least one slave unit to test said
15 channels for a transmitted signal, and wherein
- said at least one slave unit performs the step of testing said channels for a transmitted signal by testing said preamble for a predefined characteristic, e.g. a symbol, a bit sequence etc.
- 20 2. Method according to claim 1, c h a r a c t e r i z e d i n that said at least one slave unit, when having detected said predefined characteristic, interrupts the scanning and performs a test of the received message for an address.
- 25 3. Method according to claim 2, c h a r a c t e r i z e d i n that said at least one slave unit resumes the scanning of the channels for transmitted signals if the received message does not comprise an address corresponding to an address for said at least one slave unit.
- 30 4. Method according to claim 1, 2 or 3, c h a r a c t e r i z e d i n that said step of detecting a vacant channel comprises testing for a carrier wave.

5. Method according to claim 1, 2, 3 or 4, characterized in that said at least one slave unit performs the step of testing said channels for a predefined characteristic, e.g. a symbol, a bit sequence etc. repeated a number of times, for example two, three, four times etc.

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6. Method according to claim 1, 2, 3, 4 or 5, characterized in that said at least one slave unit performs the step of testing said channels for a transmitted signal by testing for a carrier wave.

10 7. Method according to one or more of claims 1 - 6, characterized in that the number of said plurality of channels is two.

8. Method according to one or more of claims 1 - 6, characterized in that the number of said plurality of channels is three.

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9. Method according to one or more of claims 1 - 6, characterized in that the number of said plurality of channels is at least four and at the most 15.

20 10. Method according to one or more of claims 1 - 9, characterized in that said master unit performs the step of testing for a vacant channel by scanning a plurality of channels.

25 11. Method according to claim 10, characterized in that said scanning performed by said master unit is performed in accordance with predefined algorithms, e.g. possibly taking into account previous transmissions performed.

30 12. Method according to one or more of claims 1 - 11, characterized in that said at least one slave unit performs the step of scanning the channels for transmitted signals by continuously or essentially continuously scanning the channels in a sequential order.

13. Method according to one or more of claims 1 - 12, c h a r a c t e r i z e d i n that said master unit waits for a reply when having transmitted said signal, and if no reply or an erroneous reply is received said master unit proceeds with the step of detecting a vacant channel.

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14. System for transmitting signals, e.g. control signals, request signals, interrogation signals etc. comprising at least two units, wherein at least one of said units is designed to operate as a master unit and wherein at least one of said units is designed to operate as a slave unit,

10 - whereby said units are designed in order to be able to use a plurality of channels for the transmission,

- whereby a master unit is designed to perform the steps of detecting a vacant channel and transmitting a signal via said vacant channel, and

15 - whereby said at least one slave unit is designed to perform the step of scanning the channels for transmitted signals,

wherein

- said signal transmitted by said master unit comprises a preamble having a length corresponding at least to the time required for said at least one slave unit to test said channels for a transmitted signal, and wherein

20 - said at least one slave unit performs the step of testing said channels for a transmitted signal by testing said preamble for a predefined characteristic, e.g. a symbol, a bit sequence etc.

25 15. System according to claim 14, c h a r a c t e r i z e d i n that said at least one slave unit is designed to, when having detected said predefined characteristic, interrupt the scanning and perform a test of the received message for an address.

30 16. System according to claim 14 or 15, c h a r a c t e r i z e d i n that said at least one unit designed to operate as a master unit comprises control means for performing a scan of a plurality of channels.

17. System according to claim 16, c h a r a c t e r i z e d i n that said control means comprises means for operating in accordance with predefined algorithms.

5 18. System according to claim 14, c h a r a c t e r i z e d i n that said at least one unit designed to operate as a slave unit comprises control means for performing a sequential scan of the plurality of channels.

10 19. System according to one or more of claims 14 - 18, c h a r a c t e r i z e d i n that said system is designed to operate in accordance with a method according to one or more of claims 1 - 13.